

**Treated Glulam
Allowable Roof
Non-Snow
Loads (plf)**

EWS 24F-V5M1/SP

Dry-Use

F_b = 2,400 psi

F_v = 300 psi

E = 1.8 x 10⁶ psi

F_{cl} = 740 psi

(LDF = 1.25)

Width (in.)	Depth (in.)	Load Condition	Span (feet)									
			8'	10'	12'	14'	16'	18'	20'	24'	28'	32'
3 1/2	9 1/2	Total Load	1,636	1,043	652	407	270	187	133	73	NA	NA
		Live Load	-	1,000	579	365	244	172	125	72	NA	NA
		Min. End/Int. Bearing (in.)	2.5/6.4	2.0/5.1	1.5/3.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA
	11 7/8	Total Load	2,559	1,633	1,131	802	533	371	267	150	90	56
		Live Load	-	-	-	712	477	335	244	141	89	-
		Min. End/Int. Bearing (in.)	4.0/9.9	3.2/7.9	2.6/6.6	2.2/5.5	1.7/4.2	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	3,182	2,273	1,574	1,153	879	613	443	251	153	98
		Live Load	-	-	-	-	782	549	400	232	146	-
		Min. End/Int. Bearing (in.)	4.9/12.3	4.4/11.0	3.7/9.2	3.2/7.9	2.8/6.9	2.2/5.4	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	3,802	2,832	2,058	1,508	1,151	906	667	379	233	151
		Live Load	-	-	-	-	-	819	597	346	218	146
		Min. End/Int. Bearing (in.)	5.9/14.7	5.5/13.7	4.8/12.0	4.1/10.3	3.6/9.0	3.2/8.0	2.6/6.6	1.8/4.6	1.5/3.5	1.5/3.5
18	Total Load	4,482	3,298	2,607	1,911	1,459	1,149	927	545	336	219	
	Live Load	-	-	-	-	-	-	851	492	310	208	
	Min. End/Int. Bearing (in.)	6.9/17.4	6.4/16.0	6.1/15.2	5.2/13.0	4.6/11.4	4.1/10.1	3.6/9.1	2.6/6.5	1.9/4.8	1.5/3.7	1.5/3.7
5 7/16	9 1/2	Total Load	2,541	1,621	1,013	633	419	290	207	114	66	NA
		Live Load	-	1,554	899	566	379	266	194	112	-	NA
		Min. End/Int. Bearing (in.)	2.5/6.4	2.0/5.1	1.5/3.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA
	11 7/8	Total Load	3,975	2,538	1,757	1,246	828	576	415	233	140	87
		Live Load	-	-	1,756	1,106	741	520	379	220	138	-
		Min. End/Int. Bearing (in.)	4.0/9.9	3.2/7.9	2.6/6.6	2.2/5.5	1.7/4.2	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	4,943	3,531	2,445	1,791	1,366	953	689	389	237	152
		Live Load	-	-	-	-	1,214	853	622	360	227	-
		Min. End/Int. Bearing (in.)	4.9/12.3	4.4/11.0	3.7/9.2	3.2/7.9	2.8/6.9	2.2/5.4	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	5,907	4,399	3,197	2,343	1,781	1,394	1,036	589	362	234
		Live Load	-	-	-	-	-	1,273	928	537	338	227
		Min. End/Int. Bearing (in.)	5.9/14.7	5.5/13.7	4.8/12.0	4.1/10.3	3.6/9.0	3.2/7.9	2.6/6.6	1.8/4.6	1.5/3.5	1.5/3.5
18	Total Load	6,963	5,123	4,050	2,959	2,244	1,757	1,410	846	522	341	
	Live Load	-	-	-	-	-	-	1,321	765	482	323	
	Min. End/Int. Bearing (in.)	6.9/17.4	6.4/16.0	6.1/15.2	5.2/13.0	4.5/11.3	4.0/10.0	3.6/8.9	2.6/6.5	1.9/4.8	1.5/3.7	1.5/3.7

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F_{cl} = 740 psi

(LDF = 1.15)

3 1/2	9 1/2	Total Load	1,504	959	652	407	270	187	133	73	NA	NA
		Live Load	-	-	579	365	244	172	125	72	NA	NA
		Min. End/Int. Bearing (in.)	2.3/5.8	1.9/4.7	1.5/3.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA
	11 7/8	Total Load	2,353	1,502	1,039	760	533	371	267	150	90	56
		Live Load	-	-	-	712	477	335	244	141	89	-
		Min. End/Int. Bearing (in.)	3.7/9.1	2.9/7.3	2.4/6.1	2.1/5.2	1.7/4.2	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	2,926	2,090	1,447	1,059	808	613	443	251	153	98
		Live Load	-	-	-	-	782	549	400	232	146	-
		Min. End/Int. Bearing (in.)	4.5/11.4	4.1/10.2	3.4/8.5	2.9/7.3	2.5/6.3	2.2/5.4	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	3,497	2,604	1,892	1,386	1,057	832	667	379	233	151
		Live Load	-	-	-	-	-	819	597	346	218	146
		Min. End/Int. Bearing (in.)	5.4/13.6	5.1/12.6	4.4/11.1	3.8/9.5	3.3/8.3	2.9/7.4	2.6/6.6	1.8/4.6	1.5/3.5	1.5/3.5
18	Total Load	4,122	3,033	2,397	1,756	1,341	1,055	851	545	336	219	
	Live Load	-	-	-	-	-	-	-	492	310	208	
	Min. End/Int. Bearing (in.)	6.4/16.0	5.9/14.7	5.6/14.0	4.8/12.0	4.2/10.5	3.7/9.3	3.4/8.4	2.6/6.5	1.9/4.8	1.5/3.7	1.5/3.7
5 7/16	9 1/2	Total Load	2,337	1,490	1,013	633	419	290	207	114	66	NA
		Live Load	-	-	899	566	379	266	194	112	-	NA
		Min. End/Int. Bearing (in.)	2.3/5.8	1.9/4.7	1.5/3.8	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA
	11 7/8	Total Load	3,656	2,333	1,615	1,181	828	576	415	233	140	87
		Live Load	-	-	-	1,106	741	520	379	220	138	-
		Min. End/Int. Bearing (in.)	3.7/9.1	2.9/7.3	2.4/6.1	2.1/5.2	1.7/4.2	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	4,546	3,247	2,248	1,646	1,255	953	689	389	237	152
		Live Load	-	-	-	-	1,214	853	622	360	227	-
		Min. End/Int. Bearing (in.)	4.5/11.4	4.1/10.2	3.4/8.5	2.9/7.3	2.5/6.3	2.2/5.4	1.8/4.4	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	5,433	4,045	2,940	2,153	1,636	1,280	1,027	589	362	234
		Live Load	-	-	-	-	-	1,273	928	537	338	227
		Min. End/Int. Bearing (in.)	5.4/13.6	5.1/12.6	4.4/11.1	3.8/9.5	3.3/8.3	2.9/7.3	2.6/6.5	1.8/4.6	1.5/3.5	1.5/3.5
18	Total Load	6,404	4,711	3,724	2,720	2,062	1,614	1,295	846	522	341	
	Live Load	-	-	-	-	-	-	-	765	482	323	
	Min. End/Int. Bearing (in.)	6.4/16.0	5.9/14.7	5.6/14.0	4.8/12.0	4.2/10.4	3.7/9.2	3.3/8.2	2.6/6.5	1.9/4.8	1.5/3.7	1.5/3.7

(1) This table is for preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.

(2) Table is based on uniform loads (beam weight considered) and the more restrictive of simple or continuous span.

(3) Tabulated live load is based on the deflection criterion of span/240.

(4) Tabulated total load is based on the deflection criterion of span/180 and includes creep deflection with an assumed LL/DL ratio of 2 or higher.

(5) Tabulated total load is in addition to the beam weight (assumed 41 pcf).

(6) Selected beam size shall satisfy both live load and total load.

(7) For live load deflection limits of L/180 and L/360, multiply live load values by 1.33 and 0.67 respectively. The resulting live load shall not exceed the total load shown.

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Allowable
Floor
Loads (plf)**

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Dry-Use

$F_b = 2,400$ psi

$F_v = 300$ psi

$E = 1.8 \times 10^6$ psi

$F_{cl} = 740$ psi

(LDF = 1.0)

Width (in.)	Depth (in.)	Load Condition	Span (feet)									
			8'	10'	12'	14'	16'	18'	20'	24'	28'	32'
3 1/2	9 1/2	Total Load	1,307	833	517	322	213	146	104	NA	NA	NA
		Live Load	1,302	667	386	243	163	114	83	NA	NA	NA
		Min. End/Int. Bearing (in.)	2.0/5.1	1.6/4.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA	NA
	11 7/8	Total Load	2,045	1,304	902	635	422	293	210	117	69	NA
		Live Load	—	1,302	754	475	318	223	163	94	59	NA
		Min. End/Int. Bearing (in.)	3.2/7.9	2.5/6.4	2.1/5.3	1.7/4.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	2,543	1,815	1,256	919	697	485	350	197	119	75
		Live Load	—	—	1,235	778	521	366	267	154	97	65
		Min. End/Int. Bearing (in.)	3.9/9.9	3.5/8.8	2.9/7.4	2.5/6.3	2.2/5.5	1.7/4.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	3,039	2,262	1,643	1,203	917	722	527	298	182	117
		Live Load	—	—	—	1,161	778	546	398	230	145	97
		Min. End/Int. Bearing (in.)	4.7/11.8	4.4/11.0	3.8/9.6	3.3/8.2	2.9/7.2	2.6/6.4	2.1/5.2	1.5/3.6	1.5/3.5	1.5/3.5
18	Total Load	3,582	2,635	2,082	1,525	1,163	915	738	430	264	171	
	Live Load	—	—	—	—	1,107	778	567	328	207	138	
	Min. End/Int. Bearing (in.)	5.6/13.9	5.1/12.8	4.9/12.2	4.2/10.4	3.6/9.1	3.2/8.1	2.9/7.3	2.1/5.2	1.5/3.8	1.5/3.5	1.5/3.5
5 7/16	9 1/2	Total Load	2,030	1,294	803	500	330	228	162	87	NA	NA
		Live Load	2,023	1,036	600	378	253	178	129	75	NA	NA
		Min. End/Int. Bearing (in.)	2.0/5.1	1.6/4.1	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	NA	NA
	11 7/8	Total Load	3,177	2,026	1,402	987	655	455	327	181	107	66
		Live Load	—	2,023	1,171	737	494	347	253	146	92	62
		Min. End/Int. Bearing (in.)	3.2/7.9	2.5/6.4	2.1/5.3	1.7/4.4	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	14	Total Load	3,950	2,820	1,952	1,428	1,082	754	543	305	184	116
		Live Load	—	—	1,919	1,208	809	569	414	240	151	101
		Min. End/Int. Bearing (in.)	3.9/9.9	3.5/8.8	2.9/7.4	2.5/6.3	2.2/5.5	1.7/4.3	1.5/3.5	1.5/3.5	1.5/3.5	1.5/3.5
	16	Total Load	4,721	3,514	2,553	1,869	1,420	1,110	819	463	283	181
		Live Load	—	—	—	1,804	1,208	849	619	358	225	151
		Min. End/Int. Bearing (in.)	4.7/11.8	4.4/11.0	3.8/9.6	3.3/8.2	2.9/7.2	2.5/6.3	2.1/5.2	1.5/3.6	1.5/3.5	1.5/3.5
18	Total Load	5,565	4,093	3,235	2,362	1,790	1,400	1,122	667	410	265	
	Live Load	—	—	—	—	1,720	1,208	881	510	321	215	
	Min. End/Int. Bearing (in.)	5.6/13.9	5.1/12.8	4.9/12.2	4.2/10.4	3.6/9.0	3.2/8.0	2.9/7.1	2.1/5.2	1.5/3.8	1.5/3.5	1.5/3.5

- (1) This table is for preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
- (2) Table is based on uniform loads (beam weight considered) and the more restrictive of simple or continuous span.
- (3) Tabulated live load is based on the deflection criterion of span/360.
- (4) Tabulated total load is based on the deflection criterion of span/240 and includes creep deflection with an assumed LL/DL ratio of 4 or higher.
- (5) Tabulated total load is in addition to the beam weight (assumed 41 pcf).
- (6) Selected beam size shall satisfy both live load and total load.
- (7) For live load deflection limits of L/240 and L/480, multiply live load values by 1.5 and 0.75 respectively. The resulting live load shall not exceed the total load shown.

